

IN THE CLAIMS:

Please find below a listing of all of the pending claims. The statuses of the claims are set forth in parentheses.

1. (Currently amended) A cooling system for cooling racks in a data center, said system comprising:

a cooling device for circulating cooling fluid in said data center, said cooling device including a fan;

a plenum having a plurality of returns and an outlet, wherein said outlet of said plenum is in fluid communication with said fan, wherein said plurality of returns are configured for removing said cooling fluid from said data center and are operable to vary a characteristic of said removal of cooling fluid through said returns; and

wherein the cooling device is configured to vary the cooling fluid circulation in said data center in response to a characteristic variance in the removal of cooling fluid through the returns.

2. (Original) The system according to claim 1, wherein said characteristic of said cooling fluid comprises at least one of volume flow rate, velocity and direction of cooling fluid removal.

3. (Original) The system according to claim 1, further comprising:

at least one return controller operable to control at least one of said returns, wherein said at least one return controller is configured to substantially independently control said returns to thereby substantially independently vary said characteristic of said cooling fluid removal.

4. (Original) The system according to claim 3, further comprising:

a plurality of sensors configured to sense an environmental condition within said data center, said environmental condition including at least one of temperature, humidity, pressure, and cooling fluid flow rate, wherein said at least one return controller is configured to substantially independently control said returns in response to said measured environmental condition.

5-11. (Canceled)

12. (Currently amended) A method of cooling a plurality of racks in a data center, said method comprising:

activating a cooling system and opening a plurality of returns, said returns being configured to remove cooling fluid from various locations of said data center;

supplying cooling fluid to various locations of the data center;

sensing the temperatures of said racks;

determining whether said sensed temperatures are within a predetermined temperature range; [[and]]

varying said removal of said cooling fluid from said racks in response to said sensed temperatures being outside said predetermined temperature range; and

varying the supply of cooling fluid in response to varying said removal of said cooling fluid.

13-21. (Canceled).

22. (Currently amended) The method according to claim 12, further comprising:
decreasing the supply of said cooling fluid to said racks in response to a decrease in
~~decreasing the removal of said cooling fluid; and~~
~~increasing the supply of said cooling fluid to said racks in response to increasing the~~
~~removal of said cooling fluid.~~

23. (Currently amended) The method according to claim ~~[[22]]~~12, wherein at least one of said supply of cooling fluid and said return of cooling fluid is varied ~~modified~~ in response to one or more of cooling fluid flow, temperature, and pressure being outside a predetermined range.

24. (Canceled).

25. (Currently amended) An apparatus for cooling a plurality of racks in a data center, said apparatus comprising:
means for activating a cooling system and opening a plurality of returns, each of said returns being configured to remove cooling fluid from various locations of said data center;
means for supplying cooling fluid to various locations of the data center;
means for sensing the temperatures of said racks;
means for determining whether said sensed temperatures are within a predetermined temperature range; ~~[[and]]~~
means for varying said removal of said cooling fluid from said racks in response to said sensed temperatures being outside said predetermined temperature range; and
means for varying the supply of cooling fluid in response to varying said removal of said cooling fluid.

26-34. (Canceled).

35. (Currently amended) The apparatus according to claim 25, further comprising:
means for decreasing the supply of said cooling fluid to said racks in response to a
decrease in ~~decreasing~~ the removal of said cooling fluid; ~~and~~
~~means for increasing the supply of said cooling fluid to said racks in response to~~
~~increasing the removal of said cooling fluid.~~

36. (Currently amended) The apparatus according to claim ~~[[35]]~~25, wherein at least one of said supply of cooling fluid and said return of cooling fluid is determined by one or more of a flow sensor, temperature sensor, and pressure sensor.

37. (Canceled).

38. (Currently amended) A computer readable medium on which is embedded computer software, said software comprising executable code for performing a method of cooling a plurality of racks in a data center, said method comprising:
activating a cooling system and opening a plurality of returns, each of said returns being configured to remove cooling fluid from various locations of said data center;
supplying cooling fluid to various locations of said data center;
sensing the temperatures of said racks;
determining whether said sensed temperatures are within a predetermined temperature range; ~~[[and]]~~
varying said removal of said cooling fluid from said racks in response to said sensed temperatures being outside said predetermined temperature range; and

varying the supply of cooling fluid in response to varying said removal of said cooling fluid.

39-47. (Canceled).

48. (Currently amended) The computer readable medium according to claim 38, further comprising:

decreasing the supply of said cooling fluid to said racks in response to a decrease in ~~decreasing the removal of said cooling fluid; and~~

~~increasing the supply of said cooling fluid to said racks in response to increasing the removal of said cooling fluid.~~

49. (Currently amended) The computer readable medium according to claim [[48]]38, wherein at least one of said supply of cooling fluid and said return of cooling fluid is varied modified in response to one or more of cooling fluid flow, temperature, and pressure being outside a predetermined range.

50. (Canceled).

51. (New) The system according to claim 3, further comprising:

a cooling device controller for controlling the cooling device, wherein said cooling device controller is configured to communicate with the at least one return controller.

52. (New) The system according to claim 1, wherein said cooling device is configured to vary at least one of a volume flow rate and temperature of the cooling fluid delivered to the racks in response to the sensed at least one environmental condition.

53. (New) The system according to claim 1, wherein the plurality of returns includes fans configured to draw cooling fluid from the data center, wherein the fans are movable to vary a direction of cooling fluid removal.

54. (New) The system according to claim 1, wherein the plurality of returns are independent of the racks.

55. (New) The system according to claim 1, wherein the cooling device is configured to vary a volume flow rate of cooling fluid delivery to the data center in a proportionate manner to the volume flow rate of cooling fluid removal from the data center.

56. (New) The method according to claim 12, wherein the step of varying said removal of said cooling fluid from said racks comprises varying at least one of volume flow rate, velocity and direction of cooling fluid removal.

57. (New) The method according to claim 12, wherein the step of varying said removal of said cooling fluid from said racks comprises substantially independently controlling said plurality of returns to thereby substantially independently vary said removal of said cooling fluid from said racks through said plurality of returns.

58. (New) The method according to claim 12, further comprising:
increasing the supply of said cooling fluid to said racks in response to an increase in the removal of said cooling fluid.

59. (New) The apparatus according to claim 25, wherein the various locations of said data center comprises a plurality of racks.

60. (New) The apparatus according to claim 25, wherein the means for varying said removal of said cooling fluid from said racks comprises means for varying at least one of volume flow rate, velocity and direction of cooling fluid removal.

61. (New) The apparatus according to claim 25, wherein the means for varying said removal of said cooling fluid from said racks comprises means for substantially independently controlling said plurality of returns to thereby substantially independently vary said removal of said cooling fluid from said racks through said plurality of returns.

62. (New) The apparatus according to claim 25, further comprising:
means for increasing the supply of said cooling fluid to said racks in response to an increase in the removal of said cooling fluid.

63. (New) The computer readable medium according to claim 38, wherein the various locations of said data center comprises a plurality of racks.

64. (New) The computer readable medium according to claim 38, further comprising:

varying at least one of volume flow rate, velocity and direction of cooling fluid removal.

65. (New) The computer readable medium according to claim 38, further comprising:

substantially independently controlling said plurality of returns to thereby substantially independently vary said removal of said cooling fluid from said racks through said plurality of returns.

66. (New) The computer readable medium according to claim 38, further comprising:

increasing the supply of said cooling fluid to said racks in response to increasing the removal of said cooling fluid.